



# UNITED STATES PATENT AND TRADEMARK OFFICE


mk

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/057,568	10/29/2001	David Edward Wenstrup	2801	4678
7590 02/03/2004				
Milliken & Company P.O. Box 1927 Spartanburg, SC 29304				
			EXAMINER	
			BEFUMO, JENNA LEIGH	
			ART UNIT	PAPER NUMBER
			1771	

DATE MAILED: 02/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/057,568	WENSTRUP, DAVID EDWARD	
	<b>Examiner</b>	<b>Art Unit</b>	
Jenna-Leigh Befumo	1771		

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 October 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 3-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other:  |

## **DETAILED ACTION**

### ***Response to Amendment***

1. The Amendment submitted on October 16, 2003, has been entered. Claim 2 has been cancelled. Claims 1 and 3 – 5 have been amended. Therefore, the pending claims are 1 and 3 – 20.
2. The amendment is sufficient to overcome the 35 USC 102 rejection based on Kalwaites (3,681,183) since Kalwaites fails to teach that the edge regions have a higher density than the middle regions, which is now required in claim 1. Also, the process taught by Kalwaites produces a final product with holes, which has a density of zero, however these zones do not have any fibers as recited in claim 2.
3. The amendment is sufficient to overcome the 35 USC 102 rejection based on Difilippantonio et al. (5,582,603) since Difilippantonio et al. fails to teach needling the nonwoven web and producing a web with the higher density zones at the edge regions of the web as is now required in Claim 1.
4. The amendment is sufficient to overcome the 35 USC 102 and 35 USC 103 rejections based on Howey (6,075,682) since Howey fails to teach that the edge regions comprise a density which is higher than the density of the zones in the middle regions of the web as is now required by Claim 1.
5. The amendment is sufficient to overcome the 35 USC 102 and 35 USC 103 rejections based on Hoyle et al. (5,741,380) since Hoyle et al. fails to teach needling the nonwoven web, and it would not be obvious to one having ordinary skill in the art since the different density zones are produced due to the fact that fibers are loosely entangled together by carding which allows them to separate easily during processing. The fibers in a needle nonwoven fabric would not be able to separate easily during the drawing step taught by Hoyle et al.

### ***Claim Objections***

Art Unit: 1771

6. Claim 3 is objected to because of the following informalities: Claim 3 depends on cancelled claim 2. The claim has been examined as if it depends on claim 1. Appropriate correction is required.

***Double Patenting***

7. Claims 16 – 20 are objected to under 37 CFR 1.75 as being a substantial duplicate of claims 4 – 8. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

***Claim Rejections - 35 USC § 102***

8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

9. Claims 1, 3, 4, 9 – 11, and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Nicolay (5,275,865).

Nicolay discloses a nonwoven web comprising a 30 to 90% partially stretched polyester fibers and the remaining portion is polyester high bulk fibers (abstract). The partially stretched polyester fibers act as binder fibers in the composite fabric and correspond to the Applicant's low melt polyester fibers, while the high bulk polyester fibers correspond to the Applicant's high melt polyester fibers. The nonwoven fabric is needed to form a fabric mat (column 3, lines 20 – 25). As shown in Figure 1, the edge regions are compressed to form high density compact regions 4. The regions between the edge regions would inherently have a lower density than the edge regions. Therefore, claims 1, 3, 4, 9 – 11 and 16 are anticipated by Nicolay.

***Claim Rejections - 35 USC § 103***

Art Unit: 1771

10. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

11. Claims 5 – 8, 12 – 15, and 17 – 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nicolay in view of Hoyle et al.

The features of Nicolay have been set forth above. While Nicolay discloses using a low melt fiber to bond the nonwoven fabric, Nicolay fails to teach using a sheath-core bicomponent fiber. The features of Hoyle et al. have been set forth in section 9 of the previous Office Action. Hoyle discloses a nonwoven fabric with various density regions, which is produced with a binder fiber to thermally bond the fabric layer together. Hoyle et al. discloses that the binder fiber can be produced from either a single component polyester copolymer fiber or a sheath/core bicomponent polyester binder fiber. Therefore, it would have been obvious to one of ordinary skill in the art to substitute a sheath/core bicomponent binder fiber, taught by Hoyle et al., for the single component binder fiber taught by Nicolay since Hoyle et al. shows that the binder fibers are equivalent and that either material would function as a binder and bond the adjacent fibers together during heatsetting. Therefore, claims 5, 7, 8, 12, 14, and 15, 17, 19, and 20 are rejected.

Further, it would have been obvious to one of ordinary skill in the art to use a polymer with a melting temperature of between 110 to 180°C as the sheath component since using binder fibers with a lower melting point would be less expensive since lower temperatures are required to melt the fibers and subsequently bond the fibers together. Thus, less energy would be required to make the final product. Therefore, claims 6, 13, and 18 are rejected.

### ***Conclusion***

Art Unit: 1771

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

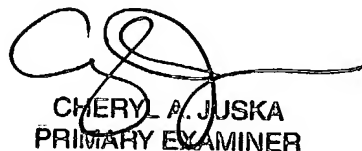
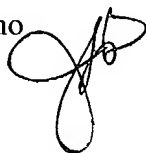
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jenna-Leigh Befumo whose telephone number is (571) 272-1472. The examiner can normally be reached on Monday - Friday (8:00 - 5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-0994.

Jenna-Leigh Befumo  
January 14, 2004



CHERYL A. JUSKA  
PRIMARY EXAMINER